

## ELEMENTS OF MMORPGS ENVIRONMENT AFFECTING SKILLS

### DEVELOPMENT OF PLAYERS

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#### ABSTRACT

*This research was aimed to study about online game-based learning, especially in Massive Multiplayer Online Role-Playing Games or MMORPGs. This is qualitative study in which the data was collected from related research works, academic papers, and documents in order to develop the model that contained elements of environment of MMORPGs that could support learning effectively. There were five experts within education technology, information technology, and educational games areas were asked to revise the model. The benefit of this is to provide valuable guidelines for creating effective environment that improves decision-making, leadership, and communication skills of MMORPGs players.*

**KEYWORDS:** MMORPGs, Game & Learning Environment

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#### INTRODUCTION

Playing from the curiosity is creative, and the expression of joy that comes from playing is the use of freedom, liberty and creativity (The Gamification Research Network, 2015). At present, games have been developed from playing as manual to online. Several games currently are available in various platforms such as computer-based or mobile-based games. However, there is no fixed pattern of game nowadays (Phuworawan, 2007).

Massively Multiplayer Online Games or MMOGs refers to a type of game that allows a number of players play game through the Internet connection in which the player plays through the server and be able to interact and connect with other players who play the game in the same time. Role-playing Games or RPGs is another type of game where players can choose their own characters to play in the game in which it becomes the remarkable point of RPGs.

Currently, there are a large number of players who play RPGs and MMOGs in which we called these players as Massive Multiplayer Online Role-Playing Game (MMORPGs). These players can plan and design strategies to solve problems or beats other players. This can result in learning acquisition.

Therefore, according to popular of MMORPGs, the study was not only to examine skills that those players obtain from playing games, but it aimed to find elements of a role-playing game environment that can affect toward learning development of those players.

The study aimed to examine skills and elements of game environment of Massive Multiplayer Online Role-Playing Game (MMORPG) that affects toward the learning development of players.

## OBJECTIVES OF THE STUDY

The study aimed to examine skills and elements of game environment of Massive Multiplayer Online Role-Playing Game (MMORPG) that affects toward the learning development of players.

## METHODOLOGY

This is qualitative study in which the researcher collected the data from related studies and documented. After that the researcher asked five experts who have 5-year experience in games, education technology, information technology and relevant fields to revised the results. All the names of experts were not written in the report of this study

## DATA COLLECTION

The researchers collected and analyzed the data for one semester. The data collection was divided into 2 phases as follows:

### Phase 1: Elements of Games Environment

The researchers studied the elements of game environment that affects toward skill development of players in which the researchers;

1.1 Collected related documents, books, or related research studies in following topics;

1.1 Game environment management

1.2 Self-determination

1.3 Situated learning

1.4 Social learning

1.5 Collaborative learning

1.2 Analyzed the elements and features of the game that affected the pattern of game environment that develops players' skills.

1.3 Develop a model based on the synthesis of the elements of game environment that impacts players' skills. After that the researchers asked five experts to revise and give suggestions.

### Phase 2: Evaluating the Elements of Game Environment

The researchers designed tools for assessing the elements a game environment that develops the skills of the players and also asked experts to revised and gave suggestions. After received the results, the researchers edited and analyzed the results by using descriptive analysis and 5-Likert Scales and wrote a report in which all of experts' names were remove from a report of this study.

## RESULTS AND DISCUSSIONS

### Elements of MMORPGs Environment

From the results, it showed that there are nine important elements 9 elements of MMORPG environment that affects the learning behaviors of players. Moreover, there are four significant skills that players obtained from playing the game which are leadership, problem- solving and decision-making, coordination, and communication skills.



Figure 1

### Elements of MMORPGs Environment

The results are shown in table 1.

**Table 1: Elements of MMORPGs Environment**

|                        |                            | Nattapol Tinwatanakij(2007). | Nattapol Huadsoonthorn(2008). | Prapaipun Sukrasorn(2015). | Aaron Delwiche (2003). | Antoine Chollet., (2015). | CA. Steinkuehler (2004) . | Cheri Li (2006). | Curtis J. Bonk (2005). | Marcus D. Childress.,<br>Ray Braswell (2006). | Rodney P. Riegler.Wesley<br>A. Matejka (2006). | Susaeta, H., (2010). |
|------------------------|----------------------------|------------------------------|-------------------------------|----------------------------|------------------------|---------------------------|---------------------------|------------------|------------------------|---|--|----------------------|
| <b>Game Element</b>    |                            |                              |                               |                            |                        |                           |                           |                  |                        |   |  |                      |
| 1.                     | Player interaction Pattern | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 2.                     | Objective                  | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 3.                     | Rules                      | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 4.                     | Procedures                 | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 5.                     | Resources                  | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 6.                     | Boundaries                 | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 7.                     | Outcome                    | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| <b>Game Aesthetics</b> |                            |                              |                               |                            |                        |                           |                           |                  |                        |   |  |                      |
| 8.                     | Sensation                  | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         |                  | ✓                      | ✓   | ✓  | ✓                    |
| 9.                     | Fantasy                    | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         |                  | ✓                      | ✓   | ✓  | ✓                    |
| 10.                    | Narrative                  | ✓                            | ✓                             | ✓                          |                        |                           | ✓                         |                  | ✓                      | ✓   | ✓  | ✓                    |
| 11.                    | Challenge                  | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         |                  | ✓                      |   | ✓  | ✓                    |
| 12.                    | Fellowship                 | ✓                            | ✓                             | ✓                          |                        |                           | ✓                         |                  | ✓                      |   | ✓  | ✓                    |
| 13.                    | Discovery                  |                              | ✓                             | ✓                          |                        |                           |                           |                  |                        |   |  |                      |
| 14.                    | Expression                 | ✓                            | ✓                             | ✓                          |                        |                           |                           |                  | ✓                      | ✓   |  | ✓                    |
| 15.                    | Submission                 |                              | ✓                             |                            |                        |                           | ✓                         |                  | ✓                      |   |  | ✓                    |
| <b>Approaches</b>      |                            |                              |                               |                            |                        |                           |                           |                  |                        |   |  |                      |
| 16.                    | Cooperative Learning       | ✓                            | ✓                             |                            | ✓                      |                           |                           |                  | ✓                      | ✓   |  | ✓                    |
| 17.                    | Situated Learning          | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 18.                    | Collaborative Learning     | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  | ✓                    |
| 19.                    | Self-determination         | ✓                            | ✓                             | ✓                          | ✓                      | ✓                         | ✓                         | ✓                | ✓                      | ✓   | ✓  |                      |
| 20.                    | Reinforcement Theory       |                              | ✓                             |                            |                        |                           |                           |                  |                        |   |  |                      |

| Table 1: Contd.,         |                    |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------|--------------------|---|---|---|---|---|---|---|---|---|---|---|
| Educational Environments |                    |   |   |   |   |   |   |   |   |   |   |   |
| 21.                      | Reality            |   |   |   |   |   |   |   |   |   | ✓ |   |
| 22.                      | Safety             |   |   |   |   |   |   |   |   |   | ✓ |   |
| 23.                      | Control            |   |   |   |   | ✓ |   |   | ✓ |   | ✓ |   |
| 24.                      | Efficiency         |   |   |   |   | ✓ |   |   |   |   | ✓ |   |
| Skills                   |                    |   |   |   |   |   |   |   |   |   |   |   |
| 25.                      | Leadership         |   | ✓ |   | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 26.                      | Decision Making    |   | ✓ |   | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 27.                      | Coordination       |   | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 28.                      | Communication      |   | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 29.                      | Creative Thinking  | ✓ |   |   |   |   |   |   | ✓ |   |   | ✓ |
| 30.                      | Hand-Eyes          | ✓ |   |   |   |   |   |   |   |   |   |   |
| 31.                      | Critical Thinking  |   |   |   |   |   |   |   |   | ✓ |   | ✓ |
| 32.                      | Solve Problems.    | ✓ | ✓ |   | ✓ |   |   |   | ✓ | ✓ |   | ✓ |
| 33.                      | Metacognitive      |   |   |   |   |   |   |   | ✓ | ✓ |   | ✓ |
| 34.                      | Reflection skills  |   |   |   |   |   |   | ✓ | ✓ |   | ✓ |   |
| 35.                      | Social Interaction |   |   | ✓ |   | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Details                  |                    |   |   |   |   |   |   |   |   |   |   |   |
| 36.                      | Gender             | ✓ |   |   |   |   |   |   |   |   |   |   |
| 37.                      | Age                | ✓ |   |   |   |   |   |   |   |   |   |   |
| 38.                      | Education Level    | ✓ |   |   |   |   |   |   |   |   |   |   |
| 39.                      | Occupation         | ✓ |   |   |   |   |   |   |   |   |   |   |
| 40.                      | Salary             | ✓ |   |   |   |   |   |   |   |   |   |   |
| Others                   |                    |   |   |   |   |   |   |   |   |   |   |   |
| 41.                      | Retention          |   | ✓ |   |   |   |   |   |   |   |   |   |
| 42.                      | Motivation         | ✓ | ✓ |   | ✓ | ✓ |   | ✓ | ✓ |   |   | ✓ |

From the results in table 1, it showed that there are four significant skills that players obtained from playing the game which are leadership, problem- solving and decision-making, coordination, and communication skills. The researchers also found out that there are nine important elements of MMORPG environment that affects the learning behaviors of players. The model that represents all elements of environment and descriptions are shown in figure 2 and table 2 below.

#### The Model of the Game Environment Developing the Players' Skills

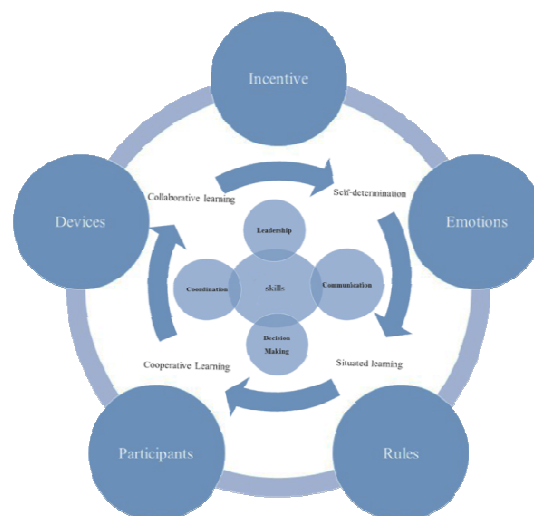


Figure 2: Model of the Elements of MMORPGs Environment

**Table 2: Descriptions of Each Element within a Model**

|                        |   |
|------------------------|---|
| Participants           | A game player who can freely choose a role with the limitation of the game.   |
| Incentive              | A motivation that encourages a player to play a game. For example, the collection of the experience to enhance the ability of characters, increase the level of the characters, the prize money and a medal.  |
| Emotions               | A player can select a character to display its behavior or emotion freely as if living in a real world.   |
| Rules                  | Rules are established to allow a player to play a game correctly and follow the objectives of the game. Also, playing game will be more systematic and ordered. In the game, a punishment for doing something wrong in each stage are told, and step on how to play are clearly explained.          |
| Devices                | A device for playing games as well as connecting to the internet network for playing online games   |
| Self-determination     | Learning which starts from a motivation generated by a player, and learning process takes place including how to set an aim or objective of learning, choose a method for learning, collect and analyze data as well as do a self-assessment  |
| Situated Learning      | Focusing on learning and practicing in a real-life situation or a realistic context as well as solving a problem arising in a complex situation which can motivate a player to do as assigned and use a freedom of thinking to create a high-quality work   |
| Collaborative Learning | Working as a group, a knowledge discovery or a knowledge exchange with a society. Collaborative learning involves with learners as a center and interaction. The process is natural in which learners must have a good experience.  |
| Cooperative Learning   | Involving 3-6 members whose roles are equally important and they must rely on each other to have a mutual success as well as exchange knowledge and thinking. Making an interaction between people and working together for achievement. Analysis of working as a team process to improve the work. |
| Leadership             | A game player will enable to develop a leadership skill and a good follower skill in each group activity.   |
| Decision Making        | A player can decide and solve a problem in a game activity or team activity as well as show an opinion and have a critical thinking for making a decision.  |
| Coordination           | A player is able to learn how to coordinate or work as a team in order to fulfill the objectives  |
| Communication          | A player will be able to acquire a communication skill for making a clear understanding.  |

### Elements of the MMORPGs Environment that Impact the Learning Behavior

The researchers gather the data from assessing the consistency and the appropriateness from five experts and it is presented in the table below.

**Table 3: The Results of Synthesizing the Elements of the MMORPGs Environment Affecting the Skills Development of Players**

| Elements of MMORPGs Environment Affecting Players' Skills Development                   | Average | Scale   |
|---|---------|---------|
| 1. Standard specification   | 4.8     | Highest |
| 2. Related theories about game environmental management affecting the learning behavior | 5.0     | Highest |
| 3. Skills players have obtained from playing MMORPGs                                    | 5.0     | Highest |

From the table 3, it shows that the average score of Standard specification was 4.8 out of 5.0. For the related theories about game environmental management affecting the learning behavior and skills players have obtained from playing MMORPGs, the average scores were 5.0 out of 5.0. The results from analyzing and synthesizing the data about the

elements of the MMORPGs environment affecting the learning behavior reveals that 4 important skills including leadership, decision making, coordination and communication will be improved based on 9 elements.

## CONCLUSIONS

The results clearly showed that there are four significant skills that players obtained from playing the game which are leadership, problem- solving and decision-making, coordination, and communication skills. For developing model, the researchers found out that there are nine important elements of MMORPG environment that affects the learning behaviors of players. The experts suggested and agreed that these nine elements affects toward learning behaviors of players.

## SUGGESTIONS

This study only focused on reviewing elements of model that can be used for creating environment that can promote skills of MMORPG players. Therefore, the future studies should apply and evaluate this model with real players in order to examine developing of skills that players can obtain when they are playing games in that environment.

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